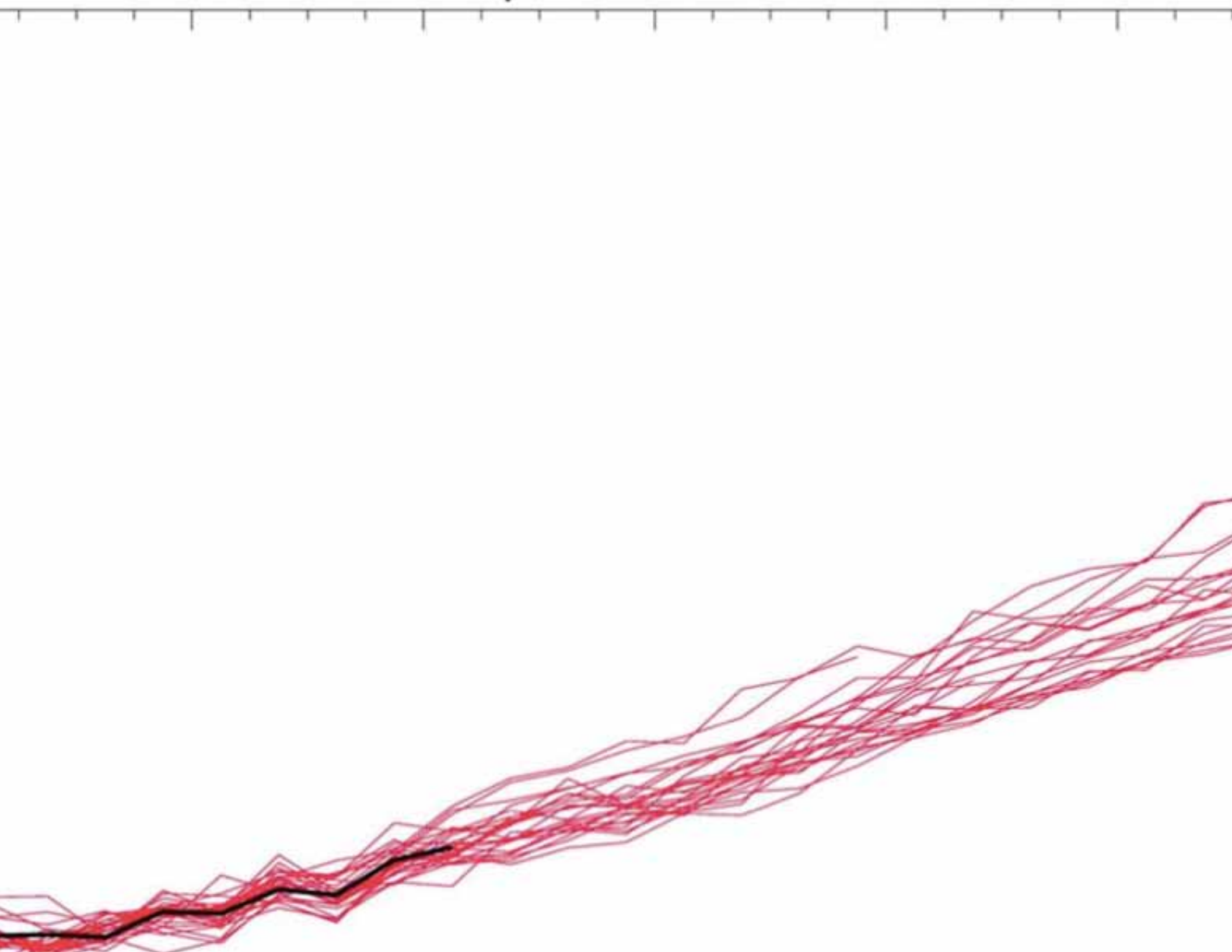
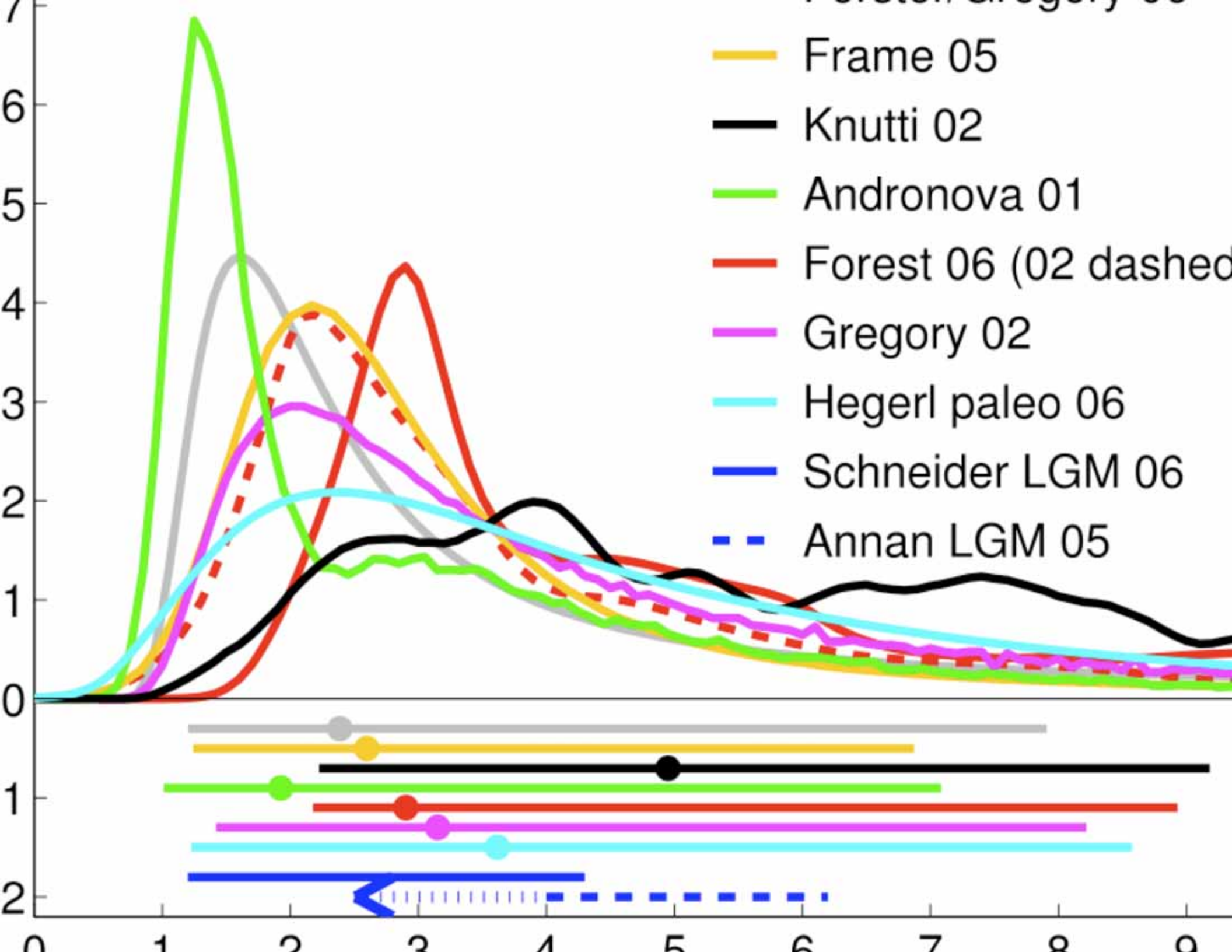
Regional climateprediction.net for the western US

Philip Mote
Oregon Climate Change Research Institute




Frame 05
Knutti 02
Andronova 01
Forest 06 (02 dashed
Gregory 02
Hegerl paleo 06
Schneider LGM 06
Annan LGM 05
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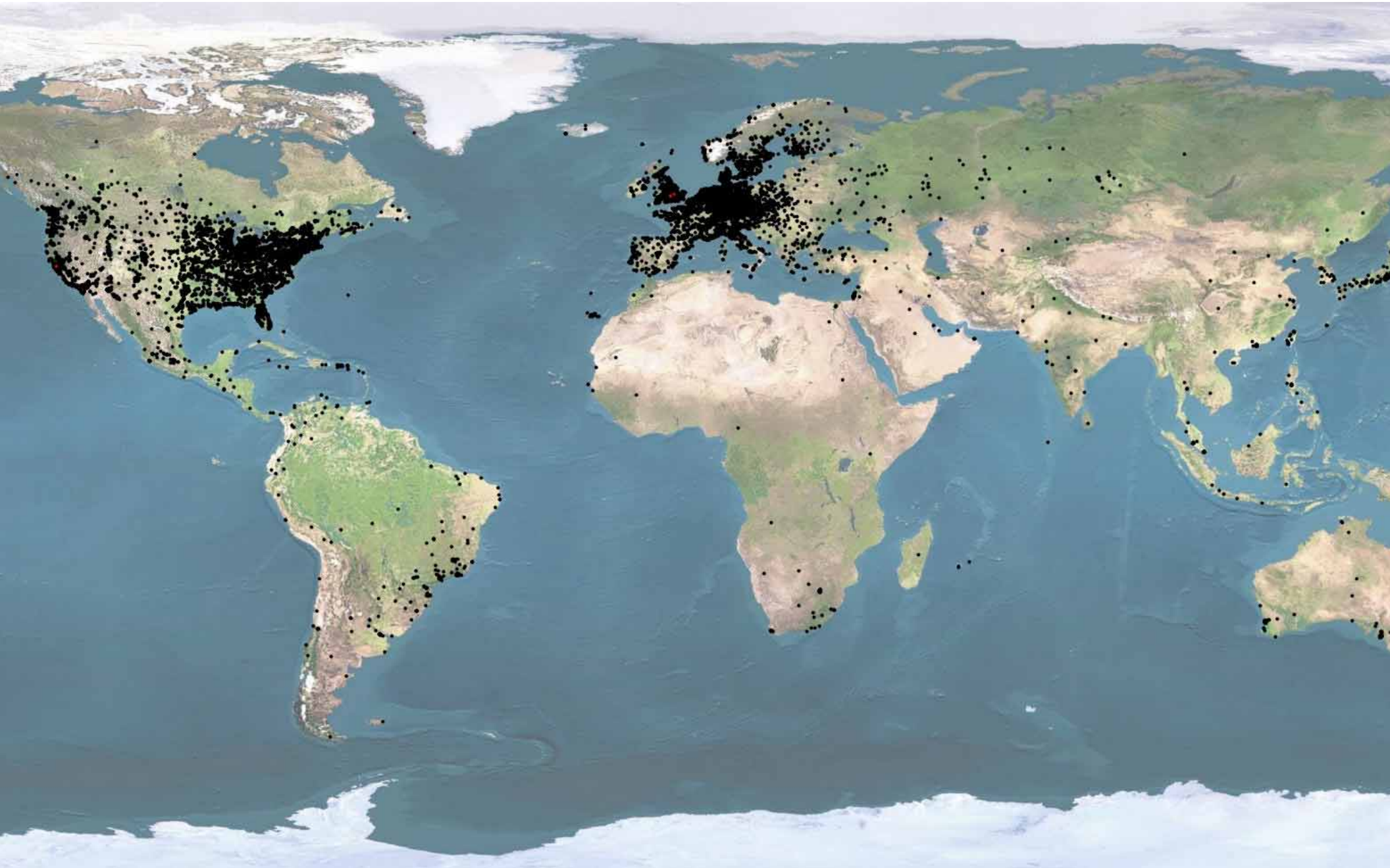
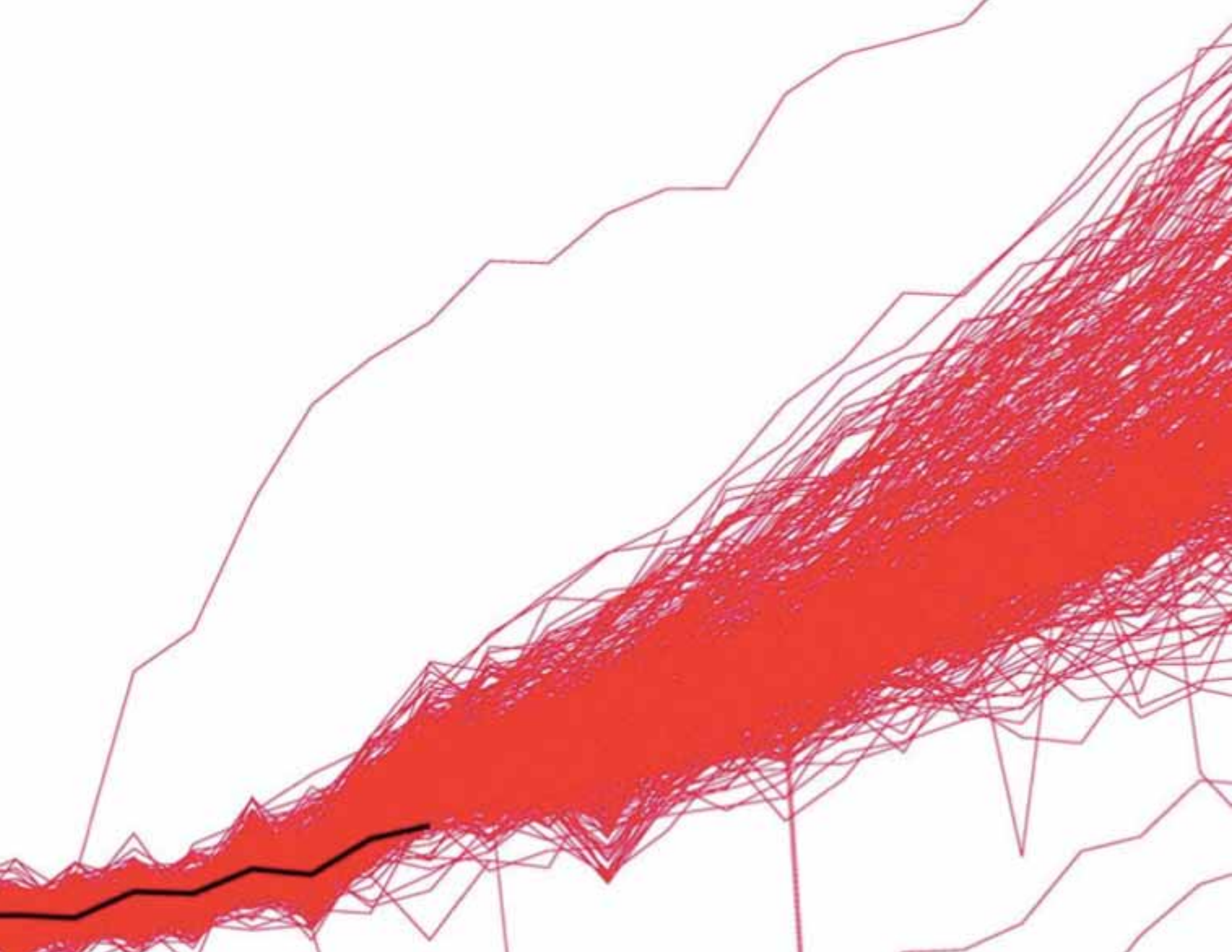
climateprediction.net





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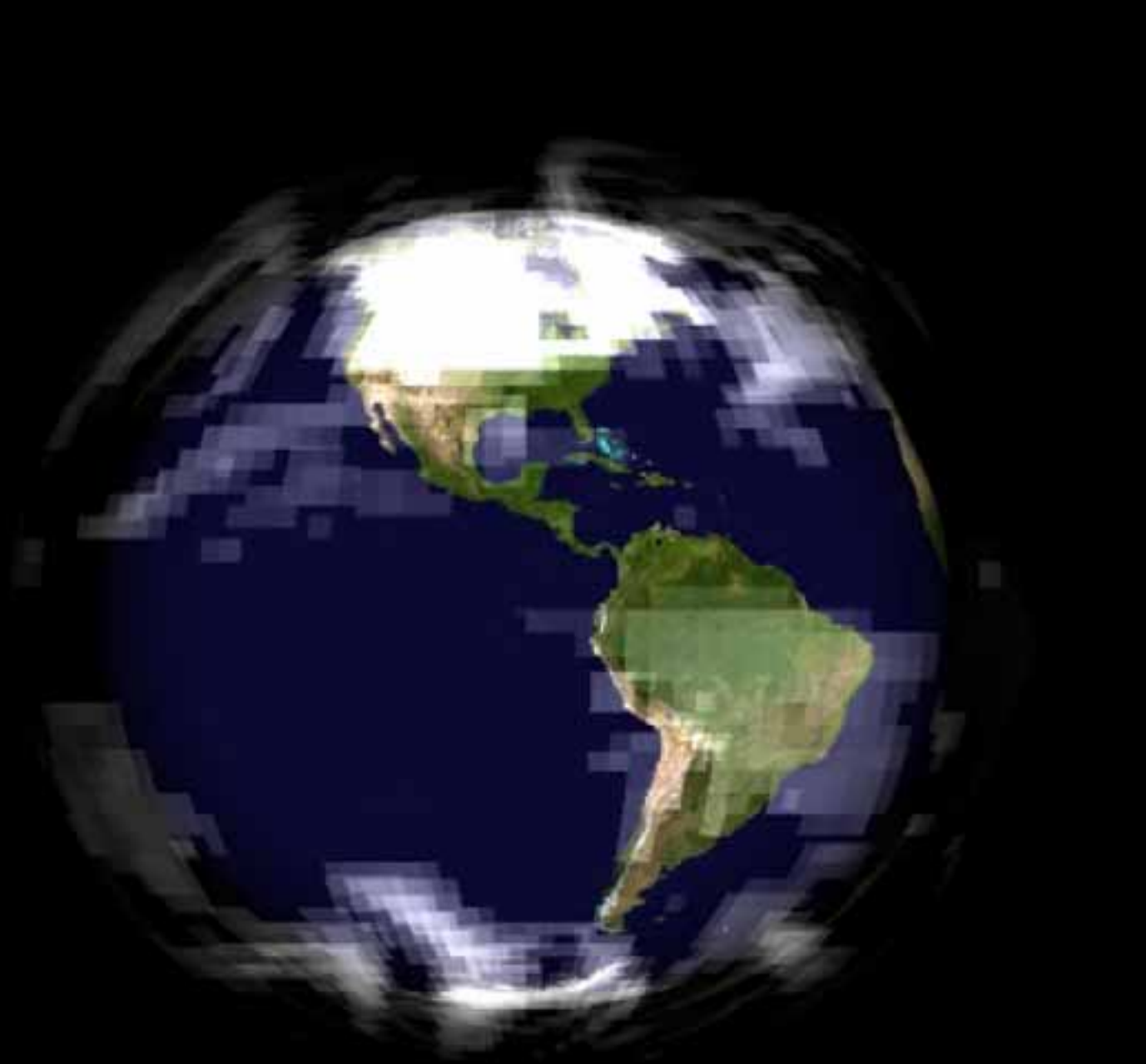
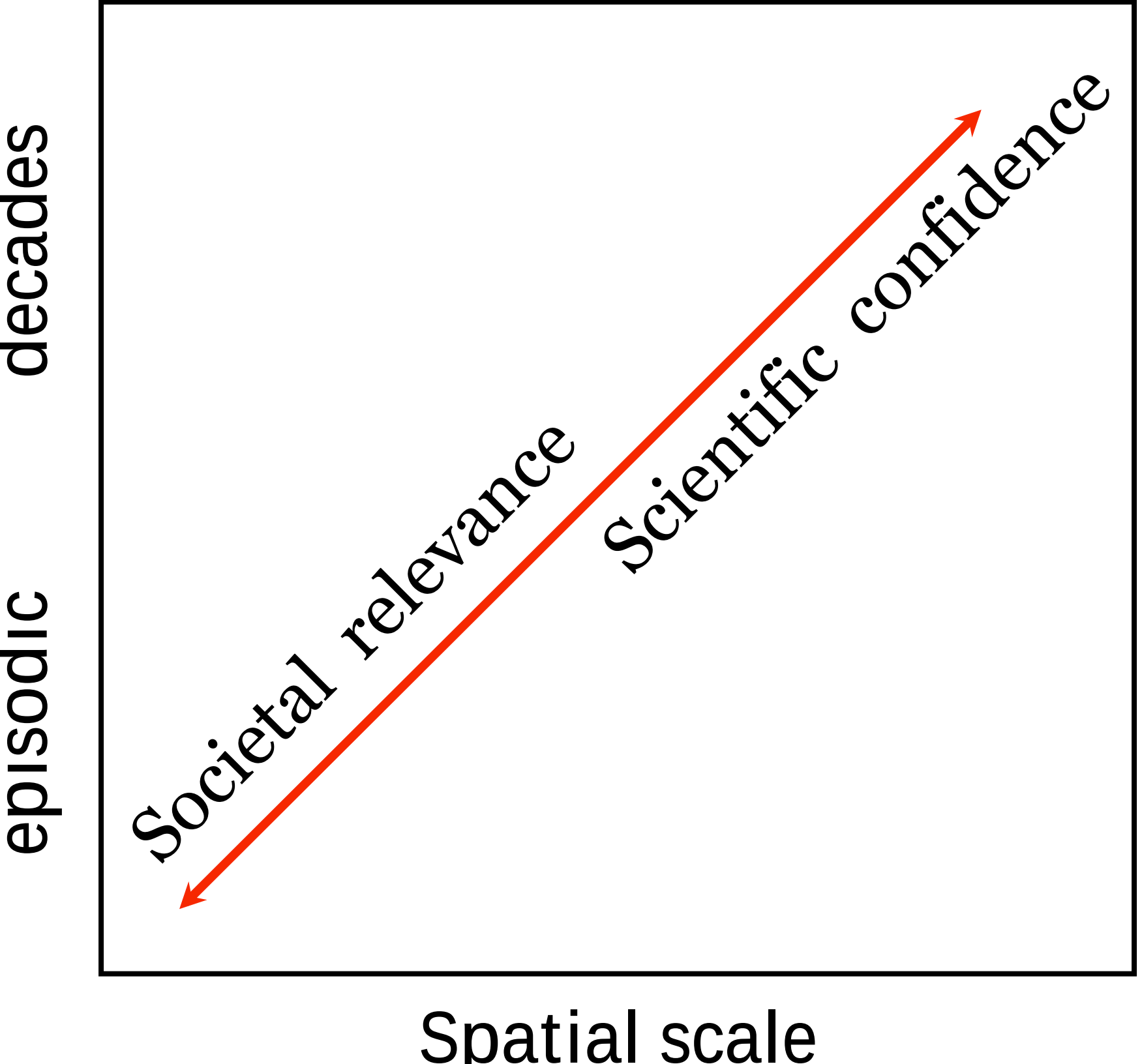


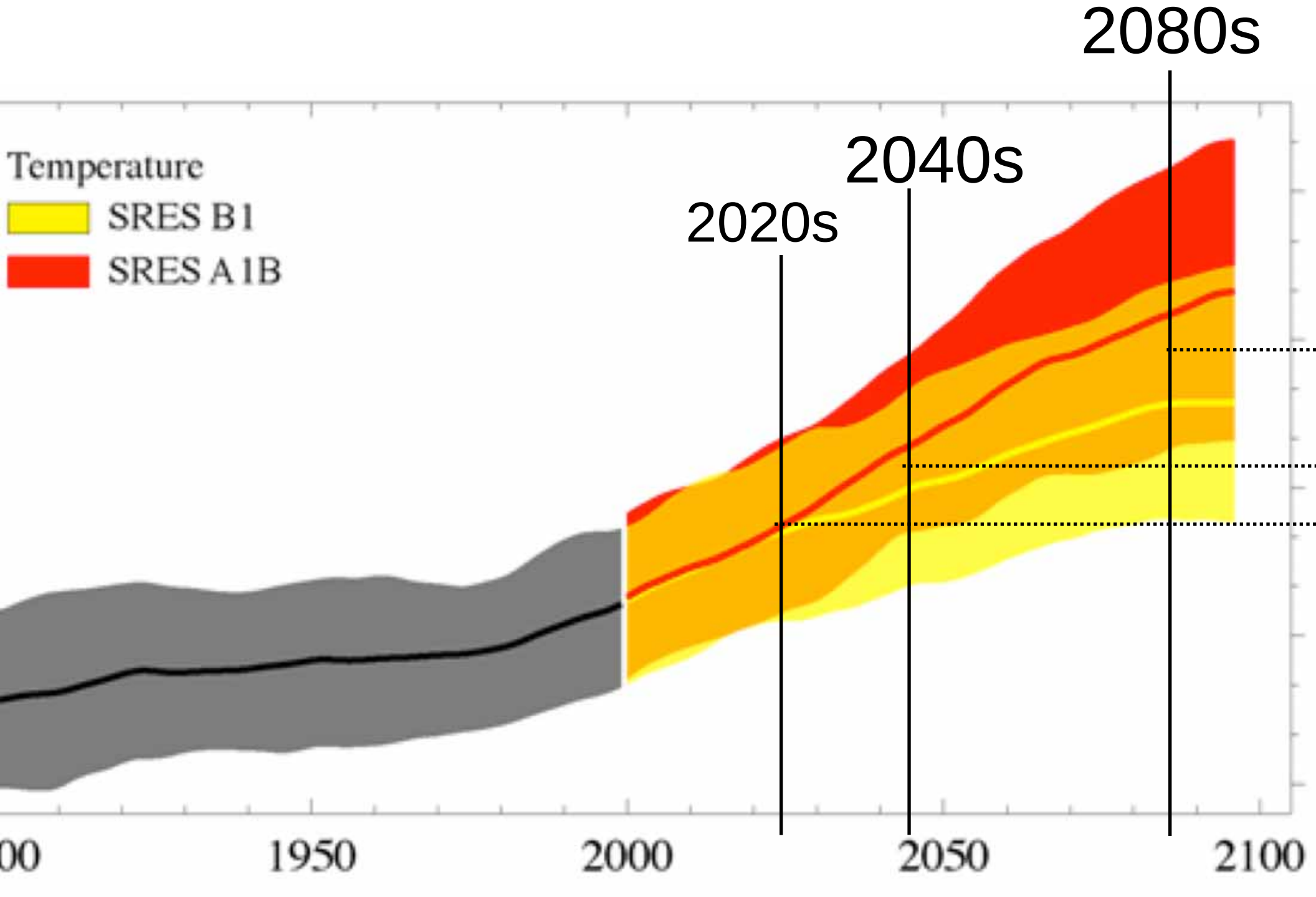
Thanks for taking part! Modelling the first few years is extremely useful for

created by


episodic
decades
Societal relevance
Scientific confidence
Spatial scale

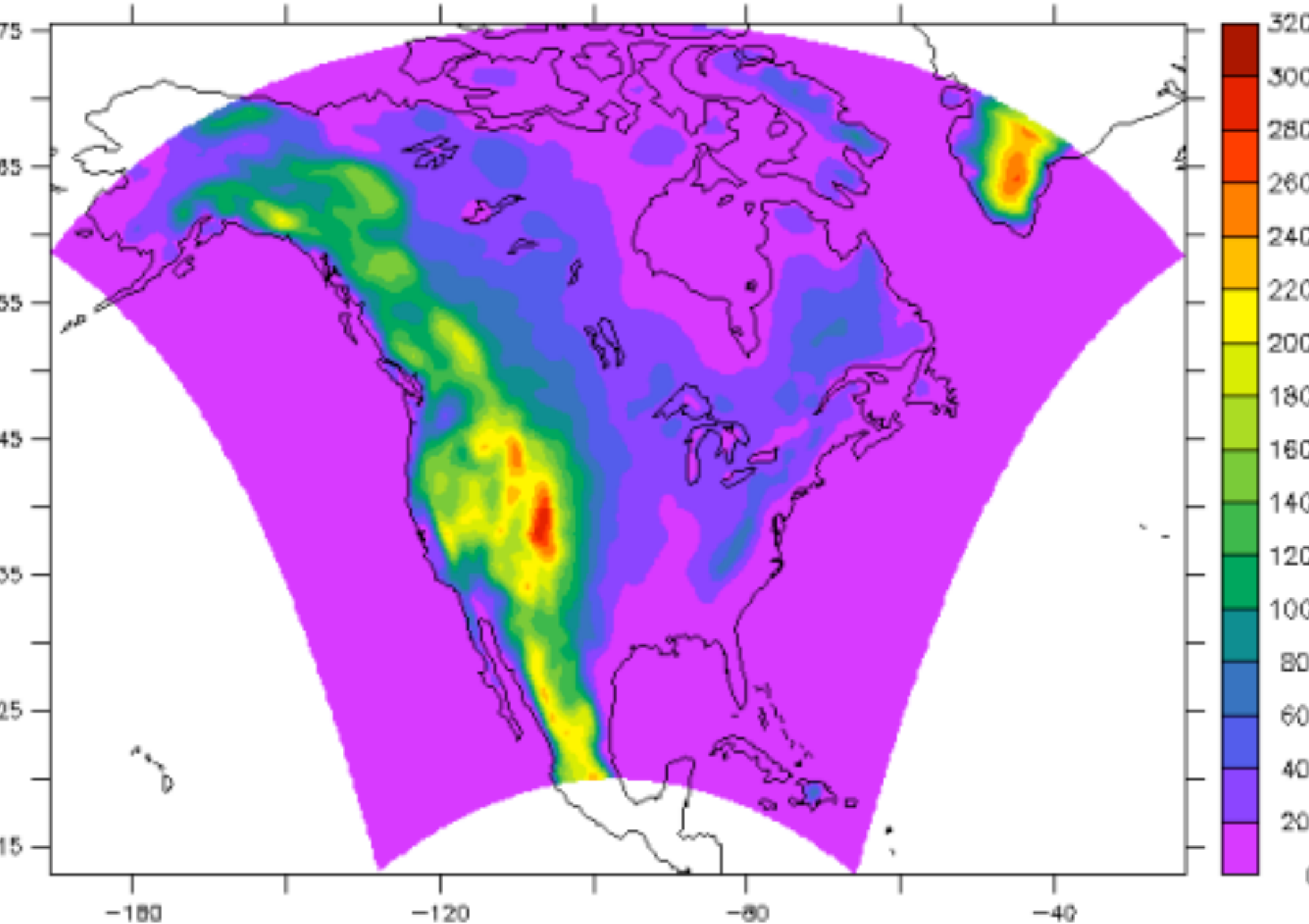

ave heavy precipitation events increased?
as the incidence of severe floods increased?
so, is it due to global climate change?

ojected increases in annual temperatur



Compared with 1970-1999 av

NARCCAP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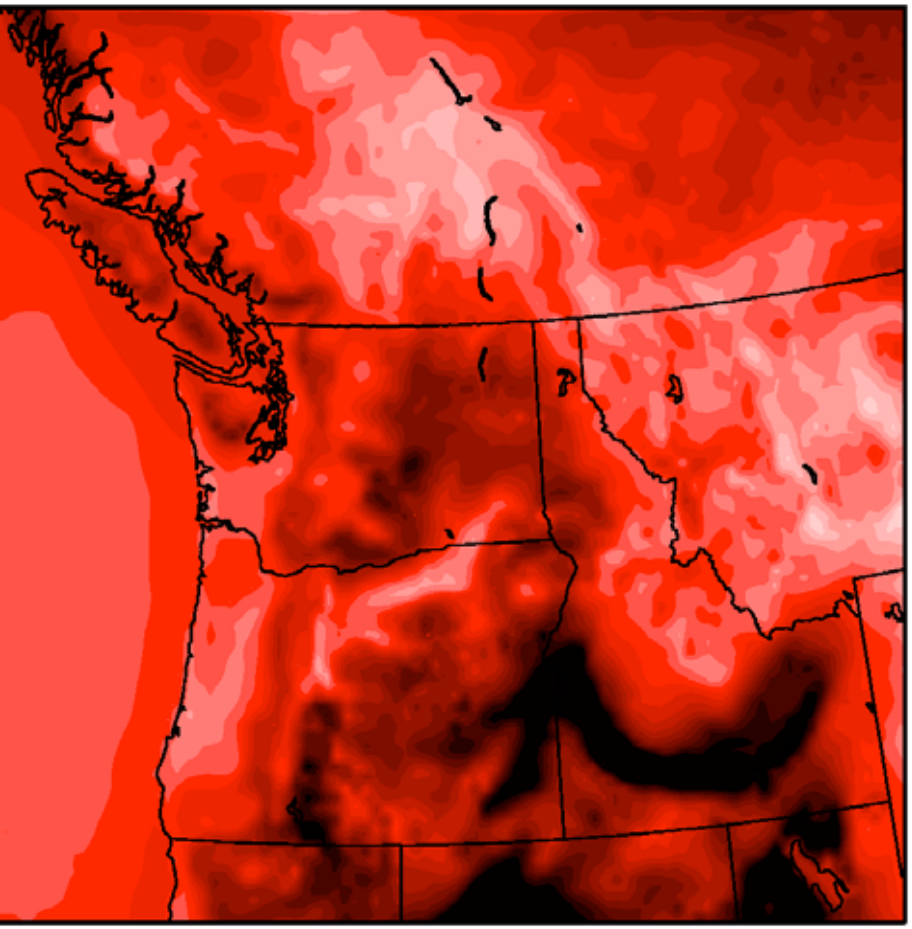
20

NARCCAP

	GFDL	CGCM3	HADCM3	CCSM	NCEP
CRCM	—	✓	—	✓	✓
ECPC	✓	—	✓	—	✓
HRM3	✓	—	✓	—	✓
MM5I	—	—	✓	✓	✓
RCM3	✓	✓	—	—	✓
WRFP	—	✓	—	✓	✓

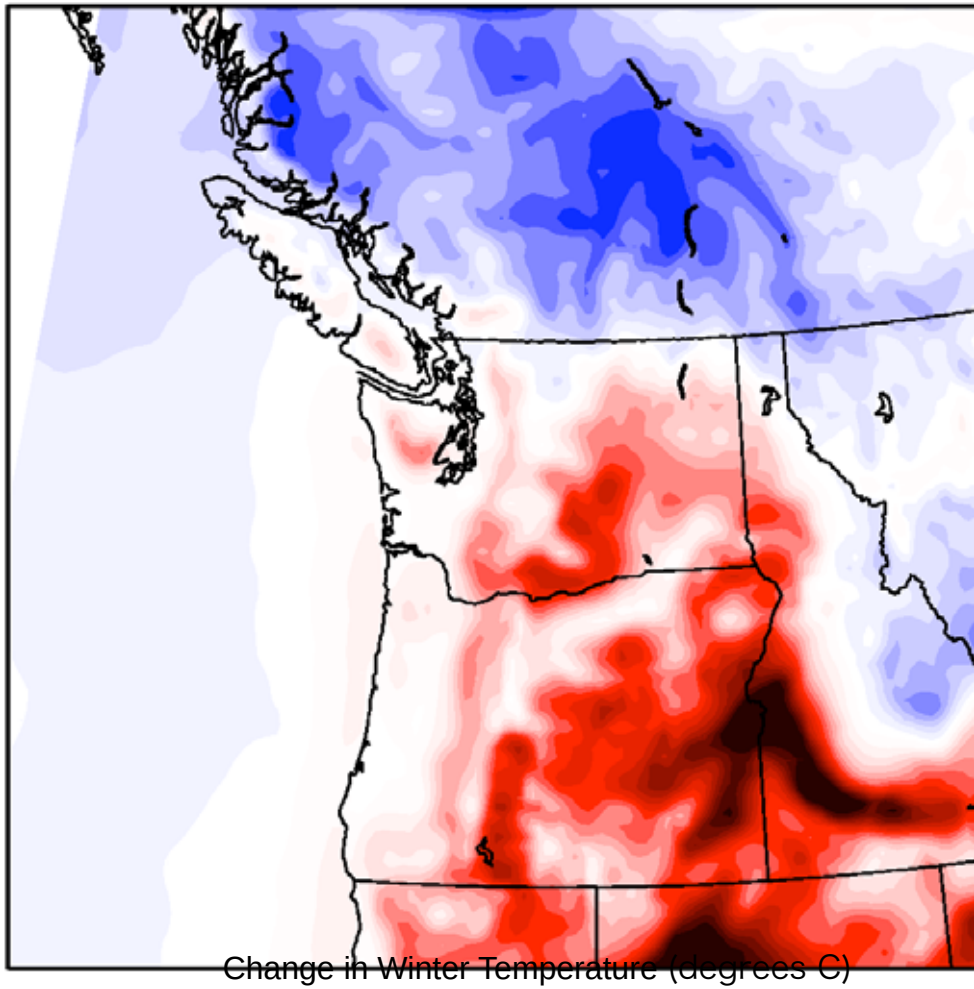
Winter Warming

1990s to 2050s Temperature Change

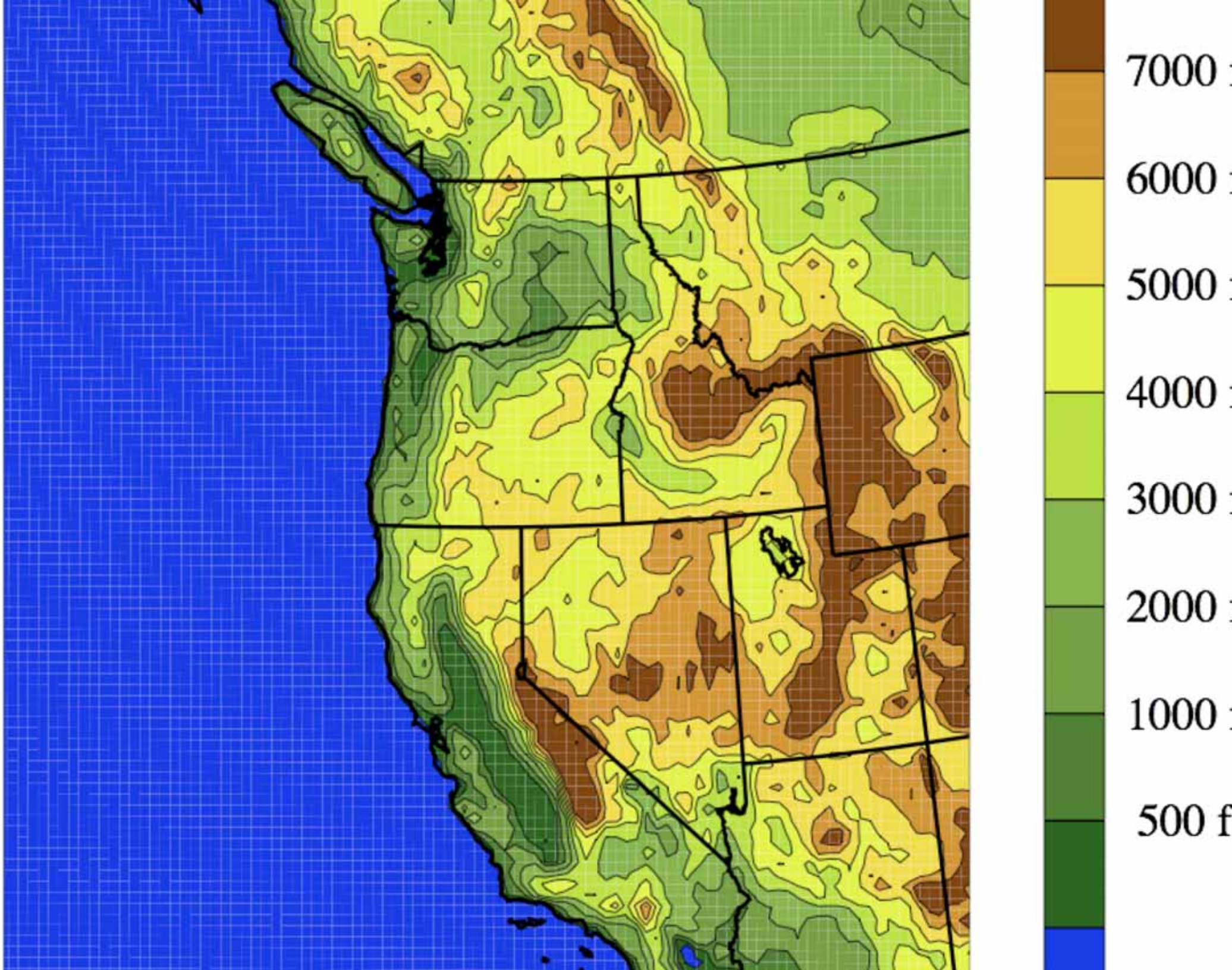


Change in Winter Temperature (degrees C)

Difference between regional and global mode



Change in Winter Temperature (degrees C)


7000
6000
5000
4000
3000
2000
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ear average of number of frost days per month
ber of days with Tmax > threshold (3 different) over the 10 years
thly 99th percentiles of Tmax, 1st percentile Tmin, computed over the 10 years
imum (Minimum) surface temperature per month and per year
treme precipitation
imum number of consecutive dry days over the 10 years
age monthly number of wet days over the 10 years
ear maximum 3-day precipitation
ber of days with P > threshold (3 different) over the 10 years
thly 99th high percentiles of P, computed over the 10 years
imum daily P for each year
treme wind
mum daily wind speed for each year
ydrological cycle
ear average of monthly soil moisture
ear average of 1st of each month snow water equivalent
ear average of monthly runoff
y maximum of daily runoff
of maximum daily runoff in average over the 10 years
of last snow in average over the 10 years
owelling

regional CPDN

- Higher spatial resolution
- Higher statistical resolution
- More societally relevant outputs